IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of   :

Toshihiro WAKAYAMA   :   **Attn: APPLICATION BRANCH**

Serial No. NEW   :   Docket No. 2001_0284A

Filed March 20, 2001   :

A SYSTEM FOR MANAGING NETWORKED
INFORMATION CONTENTS

PRELIMINARY AMENDMENT TO REDUCE PTO FILING FEE

Assistant Commissioner for Patents,
   Washington, DC 20231

Sir:

   Please amend the above-identified application as follows.

In the Claims:

   Kindly amend claims 4, 8, 11, and 15 as follows.

   4.   (Amended) The computer-implemented system according to claim 1, wherein the representation of said dependency relationships comprises:

   unique identifiers for active elements, i.e., elements involved in dependency relationships, where the uniqueness is ensured by values of a designated attribute, called content variables, uniquely assigned to those active elements, or by an equivalent means; and

   dependency expressions written in Web-standard languages such as XML (Extensible Markup Language) and MathML (Mathematical Markup Language), using element identifiers such as content variables.

   8.   (Amended) The computer-implemented system according to claim 1, further comprising a dependency structure analysis module, which:

given a set of updated active elements, identifies its update candidate set, which contains all active elements, or corresponding content variables, which depend on some active elements in the given set;

determines the presence or absence of cyclic dependencies among active elements in Web documents in the content net.

11. (Amended) The computer-implemented system according to claim 9, further comprising:

a station, namely a browser-based presentation of a Web document representing information contents in a content net, as a collection of ports for information interchange, or a port complex, over the Web; and

a station net, namely a collection of stations networked over the Web and accessible to human users in the Web environment, where each station in the collection is derived from a Web document representing information contents in a designated content net.

15. (Amended) The computer-implemented system according to claim 12, wherein content variables, or corresponding elements, of a content file map to ports of the station corresponding to the content file respecting the following constraints:

an internal reference port is associated with a set of content variables which depend on other content variables via functional dependency clauses;

an initial port is associated with a set of free variables;

an external reference port is associated with a single free variable; and

a local port is associated with the set of all non-active elements which are not sub-elements of an active element.

Kindly add new claims 17-27 as follows.

17. (New) The computer-implemented system according to claim 2, wherein the representation of said dependency relationships comprises:

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unique identifiers for active elements, i.e., elements involved in dependency relationships, where the uniqueness is ensured by values of a designated attribute, called content variables, uniquely assigned to those active elements, or by an equivalent means; and

dependency expressions written in Web-standard languages such as XML (Extensible Markup Language) and MathML (Mathematical Markup Language), using element identifiers such as content variables.

18.   (New) The computer-implemented system according to claim 3, wherein the representation of said dependency relationships comprises:

unique identifiers for active elements, i.e., elements involved in dependency relationships, where the uniqueness is ensured by values of a designated attribute, called content variables, uniquely assigned to those active elements, or by an equivalent means; and

dependency expressions written in Web-standard languages such as XML (Extensible Markup Language) and MathML (Mathematical Markup Language), using element identifiers such as content variables.

19.   (New) The computer-implemented system according to claim 2, further comprising a dependency structure analysis module, which:

given a set of updated active elements, identifies its update candidate set, which contains all active elements, or corresponding content variables, which depend on some active elements in the given set;

determines the presence or absence of cyclic dependencies among active elements in Web documents in the content net.

20.   (New) The computer-implemented system according to claim 3, further comprising a dependency structure analysis module, which:

given a set of updated active elements, identifies its update candidate set, which contains all active elements, or corresponding content variables, which depend on some active elements in the given set;

determines the presence or absence of cyclic dependencies among active elements in Web documents in the content net.

21.   (New) The computer-implemented system according to claim 4, further comprising a dependency structure analysis module, which:

given a set of updated active elements, identifies its update candidate set, which contains all active elements, or corresponding content variables, which depend on some active elements in the given set;

determines the presence or absence of cyclic dependencies among active elements in Web documents in the content net.

22.   (New) The computer-implemented system according to claim 5, further comprising a dependency structure analysis module, which:

given a set of updated active elements, identifies its update candidate set, which contains all active elements, or corresponding content variables, which depend on some active elements in the given set;

determines the presence or absence of cyclic dependencies among active elements in Web documents in the content net.

23.   (New) The computer-implemented system according to claim 6, further comprising a dependency structure analysis module, which:

given a set of updated active elements, identifies its update candidate set, which contains all active elements, or corresponding content variables, which depend on some active elements in the given set;

determines the presence or absence of cyclic dependencies among active elements in Web documents in the content net.

24.   (New) The computer-implemented system according to claim 7, further comprising a dependency structure analysis module, which:

given a set of updated active elements, identifies its update candidate set, which contains all active elements, or corresponding content variables, which depend on some active elements in the given set;

determines the presence or absence of cyclic dependencies among active elements in Web documents in the content net.

25.   (New) The computer-implemented system according to claim 10, further comprising:

a station, namely a browser-based presentation of a Web document representing information contents in a content net, as a collection of ports for information interchange, or a port complex, over the Web; and

a station net, namely a collection of stations networked over the Web and accessible to human users in the Web environment, where each station in the collection is derived from a Web document representing information contents in a designated content net.

26.   (New) The computer-implemented system according to claim 13, wherein content variables, or corresponding elements, of a content file map to ports of the station corresponding to the content file respecting the following constraints:

an internal reference port is associated with a set of content variables which depend on other content variables via functional dependency clauses;

an initial port is associated with a set of free variables;

an external reference port is associated with a single free variable; and

a local port is associated with the set of all non-active elements which are not sub-elements of an active element.

27.   (New) The computer-implemented system according to claim 14, wherein content variables, or corresponding elements, of a content file map to ports of the station corresponding to the content file respecting the following constraints:

an internal reference port is associated with a set of content variables which depend on other content variables via functional dependency clauses;

an initial port is associated with a set of free variables;

an external reference port is associated with a single free variable; and

a local port is associated with the set of all non-active elements which are not sub-elements of an active element.
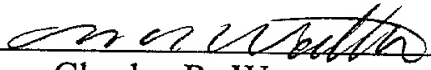
REMARKS

The above claim amendments are presented in order to remove multiple claim dependencies, so as to reduce the required filing fee.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "**Version with markings to show changes made**."

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

4.   (Amended) The computer-implemented system according to claim 1, [2 or 3,] wherein the representation of said dependency relationships comprises:

unique identifiers for active elements, i.e., elements involved in dependency relationships, where the uniqueness is ensured by values of a designated attribute, called content variables, uniquely assigned to those active elements, or by an equivalent means; and

dependency expressions written in Web-standard languages such as XML (Extensible Markup Language) and MathML (Mathematical Markup Language), using element identifiers such as content variables.

8.   (Amended) The computer-implemented system according to [any claim from claim 1 through claim 7] claim 1, further comprising a dependency structure analysis module, which:

given a set of updated active elements, identifies its update candidate set, which contains all active elements, or corresponding content variables, which depend on some active elements in the given set;

determines the presence or absence of cyclic dependencies among active elements in Web documents in the content net.

11.   (Amended) The computer-implemented system according to claim 9 [or 10], further comprising:

a station, namely a browser-based presentation of a Web document representing information contents in a content net, as a collection of ports for information interchange, or a port complex, over the Web; and

a station net, namely a collection of stations networked over the Web and accessible to human users in the Web environment, where each station in the collection is derived from a Web document representing information contents in a designated content net.

15.   (Amended) The computer-implemented system according to claim 12, [13 or 14,] wherein content variables, or corresponding elements, of a content file map to ports of the station corresponding to the content file respecting the following constraints:

an internal reference port is associated with a set of content variables which depend on other content variables via functional dependency clauses;

an initial port is associated with a set of free variables;

an external reference port is associated with a single free variable; and

a local port is associated with the set of all non-active elements which are not sub-elements of an active element.